**O117 EARLY RESULTS OF DUAL KIDNEY TRANSPLANTATION – EXPANDING THE DONOR POOL**
Tahawar Rana1, Usman Khalid2, Laszlo Szabo3, Argiris Asderakis1, Jack Jones4, Elijah Abiorus1
1University Hospital of Wales Cardiff; 2Cardiff University School of Medicine

**Background:** The most common reason for declining potential kidney donors is age coupled with Diabetes Mellitus (DM) and/or Hypertension (HTN). The implication of both kidneys from such donors into a single patient can provide a positive result. Materials & Methods
Donors considered for DKT included: 1) DBDs older than 70 with DM, HTN or both, 2) DCDs older than 65 with DM, HTN or both, and 2) all DCD donors older than 70. Recipient exclusion criteria included: history of DM, Adult Polycystic Kidney Disease, severe Cardiovascular Disease, Clopidogrel/ Warfarin therapy and BMI ≥ 31. Both kidneys were implanted on the same side. The compared outcomes of consecutive DKT performed between 6/2010 and 5/2014 with single kidney transplants from matched donors. Data was collected prospectively in a computerised database and function, survival and complication rates were calculated.

**Results:** 34 recipients received DKTs (88% DCDS) and 51 ECDs were transplanted over that period. The median recipient age for DKTs was 67.5 (52 – 80) compared to 65 (38 – 75) in the control (p = 0.02). Mean eGFR was significantly higher at six months (44.6 vs 35.4, p = 0.009). This difference increases when comparing the donors over 70 years of age (at 6 months 46.4 vs 35.6, p = 0.006, & at 12 months 46.5 vs 36.7, p = 0.005). The DKT group had lower Delayed Graft Function rate (79% vs 82%, p = 0.73), though Primary non-function had a higher incidence (% vs 2%, p = 0.14). One-year graft survivals for the DKT and matched groups was 88% and 96%, whereas 4-year graft survival 88% and 87% (p = 0.47). One-year patient survival 93% and 98%, while 4-year survival was 75% and 86% (p = 0.13).

**Conclusion:** Function of grafts from older donors with HTN and DM, which are still considered ‘not suitable for transplant’ is significantly superior if performed as DKT. Graft function and survival are also improved.

**O118 INCREASED RISK OF INTERSTITIAL FIBROSIS AND TUBULAR ATROPHY IN CONTROLLED DONATION AFTER CIRCULATORY DEATH DEATH KIDNEY TRANSPLANTATION**
Laurent Weekers1, Heu Le Dintr2, Catherine Bonvoisin3, Martina Milicic3, Stephanie Grouch3, Olivier Detry4, J-P Squifflet5, Michel Meurisse6
1CHU Liege; 2Department of Urology University of Medicine PHAM NOG THACt; 3Department of Nephrology, University of Liege, CHU Liege; 4Department of Surgery & Transplantation, University of Liege, CHU Liege

**Introduction:** Comparable transplant outcomes between controlled donation after circulatory death (cDCD) and donation after brain death (DBD) kidney transplantation (KT) have been confirmed. However, few data describes the histology of cDCD-KT which is subjected to prolonged procurement warm ischemia. This study aimed to evaluate the rate of interstitial fibrosis (IF) and tubular atrophy (TA) on the surveillance biopsy performed in our unit between the 2 and 6 months post KT. Acute rejection was considered as secondary endpoint.

**Patients and Methods:** 330 KT (226 DBD and 104 DCD) have been performed between 2008 and 2014. Surveillance or per-cause biopsy was performed between 6/2010 and 5/2014 with single kidney transplants from matched donors. Data was collected prospectively in a computerised database and function, survival and complication rates were calculated.

**Results:** 34 recipients received DKTs (88% DCDS) and 51 ECDs were transplanted over that period. The median recipient age for DKTs was 67.5 (52 – 80) compared to 65 (38 – 75) in the control (p = 0.02). Mean eGFR was significantly higher at six months (44.6 vs 35.4, p = 0.009). This difference increases when comparing the donors over 70 years of age (at 6 months 46.4 vs 35.6, p = 0.006, & at 12 months 46.5 vs 36.7, p = 0.005). The DKT group had lower Delayed Graft Function rate (79% vs 82%, p = 0.73), though Primary non-function had a higher incidence (% vs 2%, p = 0.14). One-year graft survivals for the DKT and matched groups was 88% and 96%, whereas 4-year graft survival 88% and 87% (p = 0.47). One-year patient survival 93% and 98%, while 4-year survival was 75% and 86% (p = 0.13).

**Conclusion:** Function of grafts from older donors with HTN and DM, which are still considered ‘not suitable for transplant’ is significantly superior if performed as DKT. Graft function and survival are also improved.

**O119 CAPILLARY C4D PREDICTS ADVERSE KIDNEY TRANSPLANT PERFORMANCE INDEPENDENTLY OF MORPHOLOGICAL LESIONS SUGGESTIVE OF ANTIBODY-MEDIATED REJECTION**
Ze ljko Kikic1, Alexander Kainz2, Nicolas Kozakovskij2, Rainer Oberbauer2, Heinz Regelie3, Gregor Bond4, Georg Boehmig2
1Medical University of Vienna; 2Internal medicine III, Division of Nephrology and Dialysis, Medical University of Vienna; 3Institute of Clinical pathology, Medical University of Vienna; 4gregor.bond@medunwien.ac.at

**Background:** Recent data supporting a role of C4d-negative antibody-mediated rejection (AMR) have questioned the diagnostic significance of C4d staining as an independent rejection marker. Nevertheless, considering the presumed role of complement as an important effecter of humoral rejection, C4d staining, in addition to a histomorphological biopsy work-up, could help identify a more severe form of AMR.

**Methods:** This large retrospective clinicopathological study sought to assess the predictive value of C4d staining vs graft survival and function in relation to AMR morphology. Overall, 885 renal transplant recipients subjected to one or more indication biopsies (n = 1976) were re-evaluated for linear capillary C4d staining and the presence of Atrophic Mesangial Interstitial Rejection (AMR), including glomerulitis, peritubular capillaris, capillary microthrombi, transplant glomerulopathy, and severe intimal arteritis.

**Results:** C4d-positive patients, with or without AMR features, had worse death-censored eight-year graft survival (53% vs 67%) than C4d-negative patients (67% vs 81%: p < 0.001). In Cox regression analysis, C4d posed a risk of graft loss independently of baseline confounders and AMR morphology (hazard ratio: 1.85 (95% confidence interval: 1.34-2.57), p < 0.001). Moreover, in a mixed model, C4d was independently associated with a steeper decline of estimated glomerular filtration rate (slope per year: –8.23 ± 3.97 ml/min/1.73 m2, p = 0.001). As shown in a multivariable spline interaction model, C4d conferred a particular risk of graft loss, additively to the effects of AMR morphology.

**Conclusions:** Our study supports the concept that detection of intragraft complement activation represents a specific AMR marker indicating adverse kidney transplant outcomes.

**O120 DIFFUSE PERTUBULAR CAPILLARIS IN RENAL ALLOGRAFT REJECTION: AN INDEPENDENT RISK FACTOR FOR GRAFT LOSS**
Nicolas Kozakovskij1, Harald Herker2, Georg Boehmig2, Gregor Bond2, Heinz Regele1, Christoph Kornauth1, Ze ljko Kikic2
1Institute of Clinical pathology, Medical University of Vienna; 2Department of Emergency Medicine, Medical University of Vienna; 3Internal medicine III, Division of Nephrology and Dialysis, Medical University of Vienna

**Background:** According to the Banff classification the score of peritubular capillaris (ptc), its extent and its cellular composition should be routinely assessed. This study aimed to evaluate the rate of diffuse ptc (ptc), its extent and its cellular composition should be routinely assessed. This study aimed to evaluate the rate of diffuse ptc and assess its quality on graft loss.

**Methods:** This retrospective study included 749 renal transplant recipients subjected to 1322 indication biopsies. The effect of ptc and its qualities on graft loss was estimated using proportional hazards Cox regression models. Potential confounders for multivariate analysis were: baseline immunosuppression, C4d positive graft dysfunction, acute T-cell mediated rejection – Banff Ia, re-transplantation, HLA mismatch and pre-sensitization (CDC PRA >10%).

**Results:** The prevalence of ptc score 1, 2 or 3 in biopsy specimens was 10.7%, 11.6% and 2.6%, while focal and diffuse ptc (inflammation of 50% of cortical PTC in the biopsy core) was diagnosed in 10.5% vs. 14.4%, respectively. Mononuclear, granulocytic and mixed ptc was present in 13.1%, 3.3% and 5.5%, respectively. While ptc without further sub-classification was not related to higher allograft loss rates, ptc 3 (HR = 2.57 (CI: 1.25–5.28), p